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ABSTRACT

Expectancies of reinforcement from alcohol have been investigated from a variety of research perspectives. Although results vary with methodology, subject characteristics, and amount of alcohol consumed, research seems to indicate that the expectation of receiving alcohol influences, and at times outweighs, the actual pharmacological properties of alcohol in determining certain behaviors. To determine whether significant differences exist between alcohol abusing and nonabusing adolescents, adolescent alcohol expectancies and drinking patterns were investigated in 91 adolescents and their parents. Adolescents were classified as Low Risk if neither they nor their parents had problems with alcohol, as At Risk if one parent was currently in an alcohol treatment program, and as Alcohol Abusing if the adolescent was in an alcohol treatment program. Parents were classified as Abusers or Nonabusers. Adolescents and parents completed survey materials which included demographic information, drinking history, number and kinds of recent life stressors, coping strategies, and the Alcohol Expectancy Questionnaire. Data analyses revealed that Alcohol Abusing adolescents scored significantly higher than Low Risk adolescents on the AEQ scale of Positive Cognitive Motor Changes; significantly higher than the At Risk group on Expectation of Tension Reduction; and significantly higher than both groups on Global Positive Transformation of Experience, Enhanced Social Behavior, Increased Arousal, and in total alcohol reinforcement expectancies. These findings suggest that alcohol-abusing adolescents expect significantly more reinforcement from alcohol than do nonabusing adolescents. (NRB)

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EXPECTATIONS OF REINFORCEMENT FROM ALCOHOL:

ABUSING VERSUS NONABUSING ADOLESCENTS

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EXPECTATIONS OF REINFORCEMENTS FROM ALCOHOL:

ABUSING VERSUS NONABUSING ADOLESCENTS

Expectancies of reinforcement from alcohol have been investigated from a variety of research perspectives over the past decade. Examination of the phenomenon of alcohol expectations was greatly facilitated by the implementation of the balanced placebo design (Ross, Krugman, Lylerly & Clyde, 1962). This design allows for the separation of the effects of the belief one is drinking alcohol from the actual pharmacological effects of alcohol. A pioneer alcohol study utilizing this design examined loss of control drinking associated with alcoholic craving (Marlatt, Demming & Reid, 1973). According to the results, the only significant determinant of the total amount of alcohol consumed for both alcoholics and social drinkers was the expectancy factor (belief they were drinking alcohol). Subsequent research has extended the results of this initial alcohol expectancy study to embrace a vast spectrum of behaviors. Males have been found to consume more, at a faster pace, when expecting an alcoholic beverage (Asp, 1977). College students who were led to believe they had consumed an alcoholic beverage laughed more easily than those who believed they had consumed a nonalcoholic beverage (Vuchinich, Tucker & Sobell, 1979). Other experimental alcohol expectancy studies have focused on aggressive behavior (Lang, Goeckner, Adesso & Marlatt, 1975; Rohsenow & Bachorowski, 1984), anxiety (Abrams & Wilson, 1979), and sexual behavior (Lang, Searles, Lauerman & Adesso, 1980; Wilson & Lawson, 1976). Although results vary with methodology, subject characteristics, and amount of alcohol consumed, research to date seems to indicate that the expectation of receiving alcohol influences, and, at times, predominates over the

actual pharmacological properties of alcohol in determining certain behaviors.

Several attempts have been made to explicate the specific effects expected with alcohol consumption (e.g., Southwick, Steele, Marlatt & Lindell, 1981). In particular, the Alcohol Expectancy Questionnaire (AEQ) developed by Brown, Goldman, Inn & Anderson (1980), was designed to delineate the domain of reinforcement expected from moderate alcohol consumption. First, a large number of individuals were interviewed regarding their complete range of expectancies of reinforcement from moderate drinking. Secondly, a structured questionnaire based on interview statements was developed and refined. Finally, an Alcohol Expectancy Questionnaire (AEQ) was given to 440 subjects, who answered in an "agree-disagree" format about the effects of a moderate amount of alcohol. Results were then factor analyzed to delineate the distinct expectancies associated with moderate alcohol consumption. The six expected reinforcing effects of drinking include: 1) global, positive transformations of experience; 2) enhanced social and physical pleasure; 3) sexual enhancement; 4) increased arousal; 5) increased social assertiveness; and 6) promotion of relaxation and tension reduction. Later research with this instrument demonstrated that expectations of reinforcement from alcohol were significantly higher in adult alcohol abusing than nonabusing populations (Brown, Goldman & Christiansen, in press).

In a similar fashion, the Alcohol Expectancy Questionnaire for Adolescents (AEQ-A) was developed by Christiansen, Goldman & Inn (1982). Factor analysis of adolescent AEQ data yielded seven expectancies and indicated that adolescent alcohol expectancies converge with adult expectancies by ages 17-19. Research using the AEQ-A in the general high school population suggests that adolescents experiencing

problems related to alcohol consumption expect significantly more reinforcement from alcohol than their peers (Christiansen & Goldman, 1983). Reinforcement expectancies of adolescent alcohol abusers have not as of yet been assessed and are the focus of the present study.

The present study investigates for the first time the alcohol reinforcement repertoire of the abusing adolescents to determine whether significant differences exist between abusing and nonabusing peers. The present study addresses three questions regarding adolescent alcohol expectancies and drinking patterns. Specifically, does the abusing adolescent expect more total reinforcement from alcohol than the nonabusing adolescent? If so, what specific kinds of alcohol reinforcement are abusers more likely to anticipate? Finally, does the amount of adolescent expectation of reinforcement from alcohol pattern itself after parental expectations of alcohol reinforcement?

Method

91 families with an adolescent, age 12-19, and at least one parent participated in this project. Adolescents were divided into three groups. The Low Risk Adolescent group was comprised of carefully-screened families in which neither the adolescent nor the parent had problems relating to alcohol intake (e.g., job or school, financial, family or marital, health and medical, or law enforcement). Thus, they were considered low risk for alcohol abuse. The second group, At Risk Adolescents, were considered at risk in that one parent was currently in an alcohol treatment program. In the third group, Alcohol Abusing Adolescents, the adolescent was currently in an alcohol treatment program. Adolescents of both genders were approximately equally represented. Families were primarily Caucasian, with no significant differences evident across groups on dimensions of

age and grade in school of the adolescent, or marital status, occupation, and education of the parent. Families with an abusing adolescent, however, were significantly less active in the practice of their religious preference.

On the basis of self report and the report of adolescent offspring, parents were divided into five groups. Parents of the Low Risk Adolescent group had no problems with alcohol and were categorized as Nonabusers. Parents of At Risk Adolescents and Alcohol Abusing Adolescents were further classified as Parent Abuser or Parent Nonabuser. A parent in treatment for alcoholism, of course, was classified as abusing. Additionally, if a parent met two of the following criteria, they were considered an Abuser for the present study: 1) the adolescent rated their parent as a heavy or problem drinker; 2) the parent reported five or more episodes of blackouts, delerium tremors (DTs), fights, or jail due to excessive alcohol consumption; 3) the parent rated themselves as a problem drinker; and 4) the parent reported s/he had tried to quit drinking, but had been unable to do so.

Each member of the family completed survey materials which included demographic information, drinking history, number and kinds of recent life stressors, coping strategies, and the Alcohol Expectancy Questionnaire. Data were then analyzed using Analyses of Covariance (ANCOVA) procedures to partial out the effects of differences in religious practice across groups. Analyses used the Adolescent Groups as the independent variable to see if any specific expectancies differed across the adolescent populations. To examine the total reinforcement pattern and determine whether adolescent reinforcement expectancies parallel abusing or nonabusing parental models, further analyses were performed comparing the three Adolescent Groups and five Parent Groups on Total Reinforcement Scores.

Results

The alcohol-related reinforcement expectancies of the three adolescent groups were first compared through an analysis of covariance for each of the seven AEQ-A scale scores. The results of these analyses are presented in Figure 1. Abusing Adolescents scored significantly higher than both Low Risk and At Risk Adolescents on Factor I, Global Positive Transformation of Experience ($F(2, 89) = 5.37, p < .01$), Factor II, Enhanced Social Behavior ($F(2, 89) = 5.58, p < .01$), and Factor VI, Increased Arousal ($F(2, 89) = 5.32, p < .01$). Abusing Adolescents scored significantly higher than At Risk Adolescents on Factor III, Expectation of Tension Reduction ($F(2, 89) = 9.15, p < .001$). Also, Abusing Adolescents scored significantly higher than Low Risk Adolescents on expectations of Factor II, Positive Cognitive Motor Changes ($F(2, 89) = 3.05, p < .05$).

To examine whether alcohol abusing adolescents expect significantly more reinforcement from alcohol, a total reinforcement expectancy score was calculated for each subject. The specific expectancy scale scores from the AEQ-A were summed to define a composite measure of expected alcohol reinforcement. This total adolescent AEQ reinforcement score did not include the expectation of negative consequences from drinking (Factor V, Cognitive and Behavioral Impairment). Figure 2 presents the results of analysis of variance of the total alcohol expectancy measure. Abusing Adolescents scored significantly higher than both Low Risk and At Risk Adolescents in total alcohol reinforcement expectancies ($F(2, 89) = 7.68, p < .001$).

Also presented in Figure 2 are results of analysis of covariance of the total expectancy measure within the parental population. The parental population was divided into five groups, as follows: 1) Parent Nonabuser

(Low Risk Adolescent); 2 Parent Abuser (At Risk Adolescent); 3) Parent Nonabuser (At Risk Adolescent); 4) Parent Abuser (Alcohol Abusing Adolescent); and 5) Parent Nonabuser (Alcohol Abusing Adolescent). Parent Abusers of At Risk Adolescents scored significantly higher than all other parental groups ($F, (5, 119) = 10.06, p < .001$).

Discussion

This study demonstrates for the first time that alcohol-abusing adolescents expect significantly more reinforcement from alcohol than nonabusing adolescents, and identifies the areas of maximal reinforcement expectancy. Specifically, alcohol abusing adolescents hold significantly higher expectations than their peers regarding alcohol's ability to induce: 1) global, positive transformations; 2) enhanced social behavior; 3) improved cognitive abilities; 4) increased arousal; and 5) promotion of relaxation and tension reduction. The pattern of higher reinforcement expectancies of adolescent abusers is consistent with the the adult expectancy and alcohol use findings (Brown, Goldman & Christiansen, in press). Since the pattern of total expectancies in the present adolescent population differs significantly from that of their parents, adolescents do not appear to be modeling these expectations from parental influence. In particular, offspring of alcoholics do not appear to endorse the higher reinforcement expectancies modeled by their abusing parent. Instead, their alcohol expectancies are consistent with nonabusing peer and nonabusing parental models. Secondly, adolescent abusers hold reinforcement expectancies higher than either their abusing or nonabusing parent.

The present study, however, has certain limitations with regard to the relation of parental and adolescent alcohol use and abuse. First, this study consisted of a fairly limited subject population, and requires

replication. Second, this study is correlational, and, consequently, causal inferences cannot be drawn. Longitudinal studies are needed to determine whether higher expectancies preceded or followed alcohol use.

The identification of specific areas of alcohol expectations in the adolescent alcohol-abusing population may have potential import in terms of education and treatment of alcohol abuse. Educational programs might include the expectancy phenomenon and its effect in mediating the cognitive effects of alcohol consumption. Treatment programs could focus on specific expectancies of reinforcement from alcohol and offer an alternative, acceptable behavior. For example, if an abusing adolescent showed an elevated pattern of expectation on the relaxation and tension reduction scale, alternative methods of relaxation could be introduced. The adolescent would then practice these techniques until a reinforcement expectation was anticipated by the use of the technique. Unlike many demographic characteristics, considering the age of the referrent population, it is suggested that alcohol expectancies are potentially modifiable.

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Figure 1

ADOLESCENT EXPECTANCY SCALES

1. Control (Nonabusers)
2. At Risk (Parent abusers)
3. Alcoholic (Adolescent abusers)

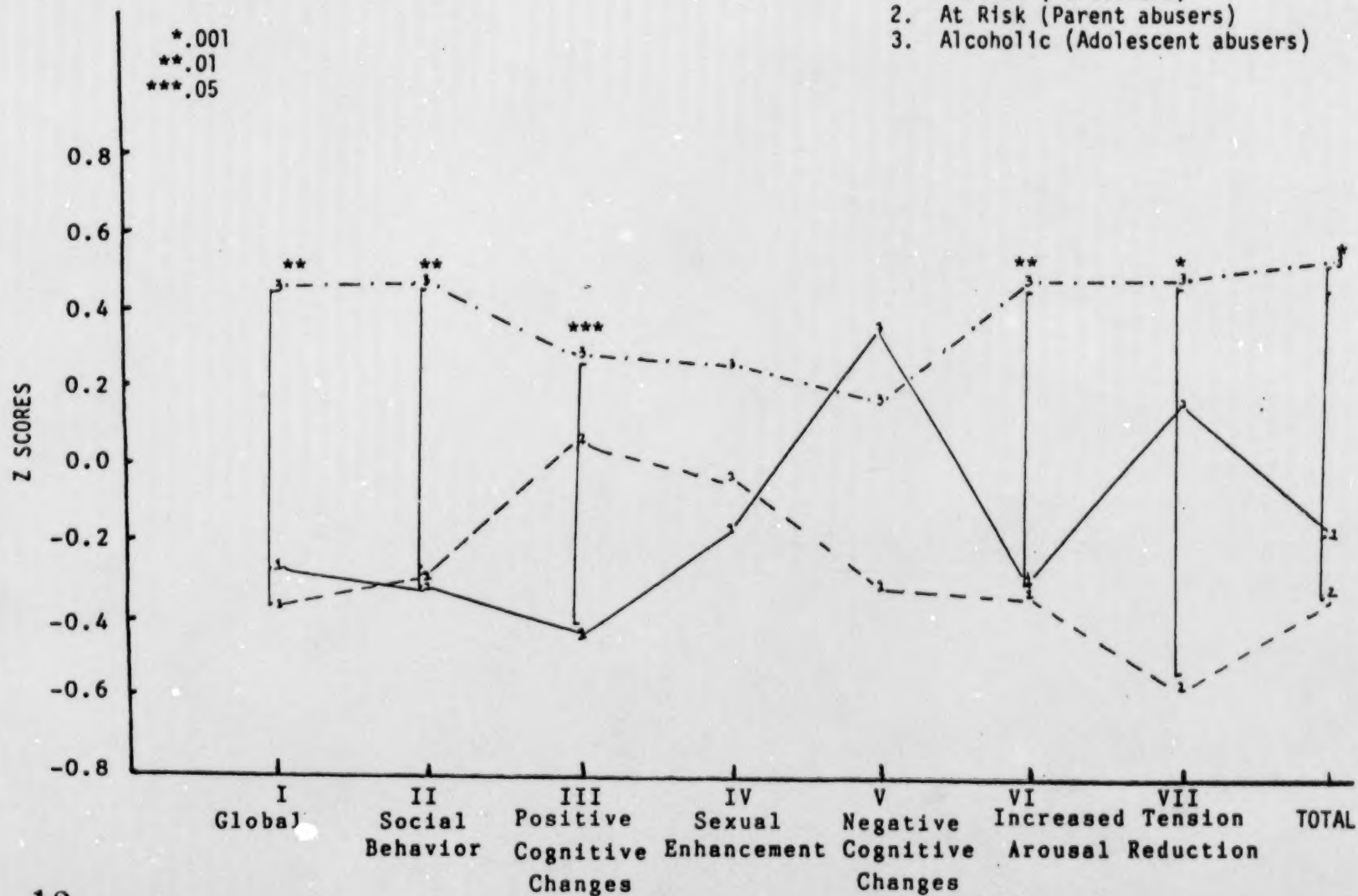
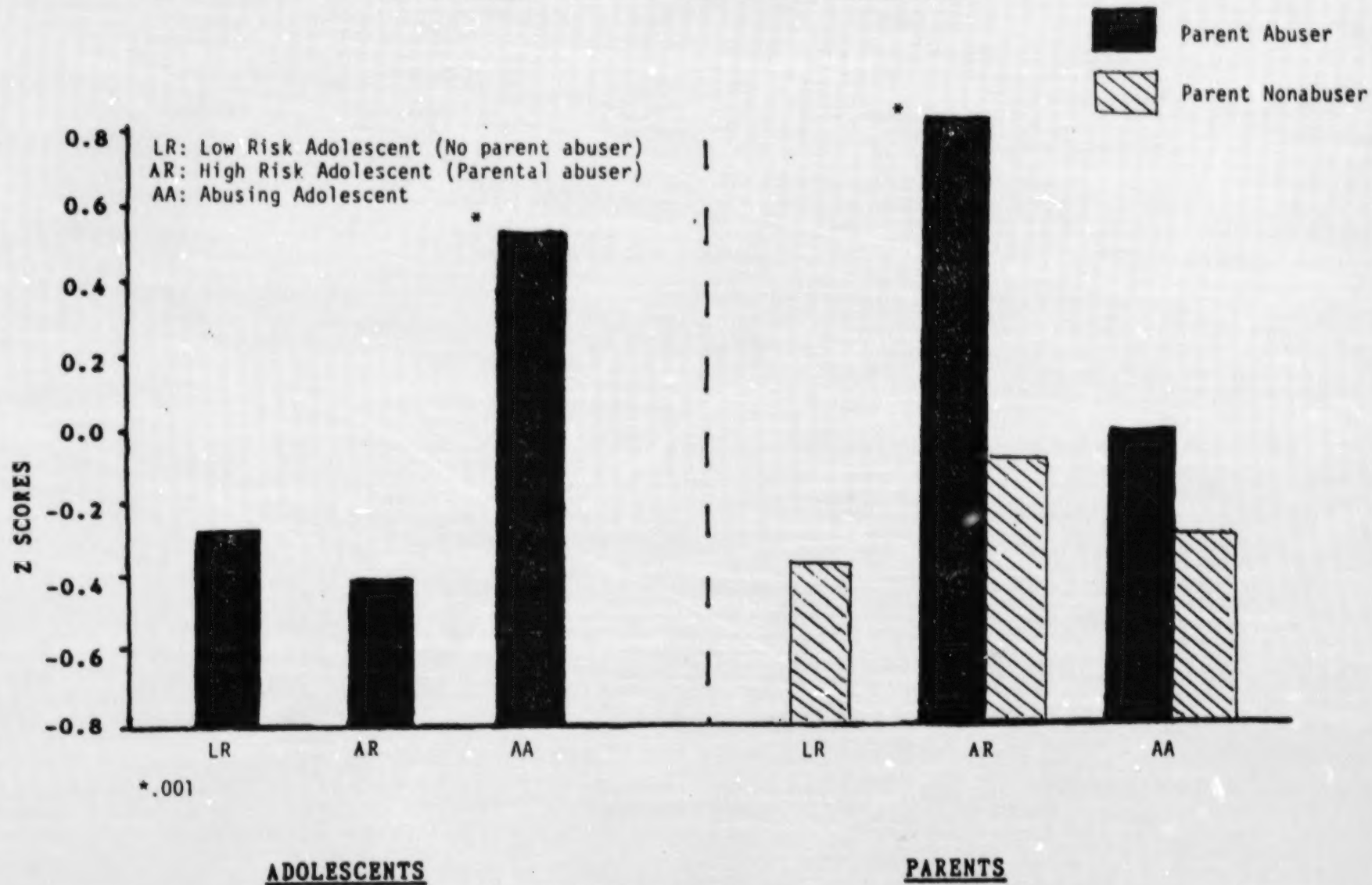


Figure 2

TOTAL ANTICIPATED ALCOHOL REINFORCEMENT



*.001

ADOLESCENTS

PARENTS

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